

### **ABSTRACT OF THE DISCLOSURE**

Chemical reactions are carried out with molten fluoropolymer, most conveniently in an extruder, wherein the reaction zone in the extruder is isolated from the melting zone, and the molten fluoropolymer is subdivided in the reaction zone sufficiently that contact and reaction between the reactant and the molten fluoropolymer in the reaction zone is essentially free of mass transfer limitation, followed by devolatilization in isolation from the reaction zone, and cooling the devolatilized fluoropolymer.